

DESCRIPTIONS OF NEW *SYNTOMIDAE*.

BY THE HON. WALTER ROTHSCHILD, PH.D.

1. *Callitomis gigas* sp. nov.

♂. Antennae simple, pubescent, black-brown; legs black-brown; head and collar yellow; thorax pale yellowish fuscous; abdomen pale sulphur-yellow with seven dark chocolate-brown rings.—Wings brownish fuscous, densely clothed with yellow scales; veins, costal edge, and fringes dark brown; forewing has a patch below base of cell, the cell, a patch between veins 3 and 4, 4 and 5, and 6 and 7 semihyaline pale buff; whole of costal area between costal and subcostal nervures yellow; hindwing has base, a larger spot between veins 2 and 3, and a smaller one between 3 and 5 semihyaline buff.

Length of forewing: 26 mm.

Hab. North Luzon, Philippine Islands, 5000—6000 ft. (J. Whitehead).

2 ♂♂.

2. *Callitomis distorta* sp. nov.

♀. Antennae brown; legs brown; thorax black-brown with orange stripes; frons orange; abdomen black-brown with six narrow orange rings.—Forewing deep earth-brown.—Hindwing minute, distorted, and aborted, deep earth-brown.

Length of forewing: 14 mm.; of hindwing 6 mm.

Hab. Pulo Bisa, north of Obi Island, September 1897 (W. Doherty).

2 ♀♀.

3. *Ceryx affinis* sp. nov.

♂. Differs from *sphenodes* Meyr. in the abdomen having a longitudinal black dorsal band, and in the hyaline patch on hindwing being reduced to a round spot and having a yellow streak below base of cell.

♀. Similar, but without abdominal band and yellow streak at base of hindwing.

Length of forewing: ♂ 14 mm.; ♀ 16 mm.

Hab. Kumasi River, North-East British New Guinea (low country), September 1907 (A. S. Meek).

7 ♂♂, 2 ♀♀.

4. *Ceryx meeki* sp. nov.

♂. Pectus, frons, and tegulae orange; antennae black; thorax black with orange patch; abdomen black with seven complete orange bands.—Forewing black glossed with purple; a large patch below the cell, a large patch within the cell, a smaller patch between veins 3 and 4, one between veins 4 and 5, and one between 7 and 8 hyaline.—Hindwing orange, costal and outer margin broadly black, but tornus and abdominal margin orange.

♀. Similar, but hyaline spots larger and hindwing rounder.

Length of forewing: ♂ 13 mm.; ♀ 15 mm.

Hab. Milne Bay, British New Guinea, November 1898 to January 1899 (A. S. Meek).

2 ♂♂, 1 ♀.

5. *Ceryx keiensis* sp. nov.

♂. Differs from *puncta* Druce in having tegulae and frons orange, abdomen bright steel-blue, and subdorsal points orange. The hyaline patches on forewings also larger.

♀. Similar, but whole head and thorax orange.

Length of forewing : 14 mm.

Hab. Key Islands, January 1897 (H. Kühn).

12 ♂♂, 4 ♀♀

6. *Ceryx dohertyi* sp. nov.

♂. Frons white; antennae brown-black with white tips; thorax brown-black; abdomen, first four segments oily steel-green, remainder olive-bronze, with a narrow whitish ring on seventh segment.—Forewing brown-black, a large patch below cell, a small one in cell, and a very large patch beyond cell divided into four by the nervures, hyaline; basal three-fifths of hindwing hyaline, margins and outer two-fifths black-brown.

♀. Similar, but with five abdominal whitish rings.

Length of forewing : 14 mm.

Hab. Perak, January—February 1890 (W. Doherty), type and 2 ♂♂, 1 ♀ (Elwes coll.); Padang Rengas, Malay Peninsula, 2 ♂♂, 1 ♀; Gunong Ijau, Malay Peninsula, 1 ♀.

7. *Ceryx ericssoni* sp. nov.

♂. Head, antennae, thorax, and abdomen black.—Forewing black, a large patch between veins 1 and 2, a large patch in cell, a smaller patch between veins 2 and 3, large patches between veins 3 and 4 and 4 and 5, and a large patch beyond cell hyaline.—Hindwing black with central hyaline patch.

Length of forewing about 16 mm.

Hab. Padang Sidempoean, West Sumatra (Ericsson).

1 ♂.

8. *Ceryx aurantiobasis* sp. nov.

♂. Coxae of forelegs, head, and tegulae orange; antennae brown; thorax black-brown with orange patch; abdomen black-brown with lateral series of orange patches.—Forewing black-brown, a large patch in cell and one below it hyaline; a hyaline patch between veins 4 and 5, a similar small spot between veins 6 and 7, and a larger hyaline patch beyond cell.—Hindwing: basal one-fourth orange, rest black-brown with oval hyaline patch.

♀. Similar.

Length of forewing : ♂ 14 mm.; ♀ 17 mm.

Hab. Kapaur, Dutch South-West New Guinea (low country), January 1897 (W. Doherty).

3 ♂♂, 1 ♀.

9. *Ceryx kuehni* sp. nov.

♂. Entirely black.—Forewing with an enormous patch below cell reaching to outer margin; a large patch in cell, a patch between veins 2 and 3 and 3 and 4, and one between 6 and 7 and 7 and 8 hyaline.—Hindwing yellowish hyaline with black margins.

Length of forewing : 12 mm.

Hab. Taam Island, west of Key Islands, July 25, 1898 (H. Kühn).

1 ♂.

10a. *Ceryx swinhoei minor* subsp. nov.

♀. Smaller; hyaline spots much reduced.

Length of forewing: *swinhoei swinhoei*, 16 mm.

" " *swinhoei minor*, 12 mm.

Hab. Manavolka Island (=Manawoka), Moluccas, November 13, 1899 (H. Kühn).

1 ♀.

11. *Trichaeta hosei* sp. nov.

♀. Antennae, basal two-thirds black-brown, apical one-third whitish buff; head, thorax, and abdomen black shot with greenish steel-blue.—Forewing dull black shot with deep purple, below base of cell a quadrate hyaline white spot, beyond cell a large oblique hyaline patch.—Hindwing black with purple sheen and central hyaline spot.

Length of forewing: 17 mm.

Hab. Mount Mulu, North Borneo, 1000—4000 ft., August—December 1894 (Hose).

1 ♀.

12. *Trichaeta kannegieteri* sp. nov.

♀. Antennae black, tips white; legs banded with white; head, thorax, and abdomen black.—Forewing black, a spot below cell, one in cell at apex, one patch between veins 4 and 5 and 5 and 6, and a spot beyond cell hyaline.—Hindwing black; a small central hyaline spot.

Length of forewing: 16 mm.

Hab. Hili Madjedja, North Nias, September—December 1895 (L. Z. Kannegieter), 1 ♀ (type); Pulo Nias (Dr. Fehr), 1 ♀; interior of Nias Island, 2 ♀ ♀.

Since the publication of Volume I. of the British Museum *Catalogue of Lepidoptera Heterocera* in 1901, it has been definitely ascertained, as Mr. Prout informed me, that *Amata* Fabr. was published in 1807, while *Syntomis* dates from 1808; therefore *Amata* must replace *Syntomis*.

13. *Amata tunneyi* sp. nov.

♂. This queer little species is near to nothing, but resembles *humeralis* Butl. somewhat in its short, broad, and rounded wings.

Antennae brown, strongly pectinated; legs, head, thorax, and abdomen orange.—Forewing semihyaline orange-buff, margins and a discocellular patch brown; there is a brown patch running in from outer margin between veins 2 and 3, and another from inner margin to edge of cell.—Hindwing orange with black-brown borders, a patch running into disc at vein 3.

Length of forewing: 11 mm.

Hab. Derby District, West Australia (Tunney).

4 ♂ ♂.

14. *Amata pambertoni* sp. nov.

♀. Antennae dull black, white tips; head, thorax, and abdomen dull black glossed with oily steel-green.—Forewing blackish steel-blue, a hyaline spot in cell and one below cell.—Hindwing blackish steel-blue with a hyaline spot below base of cell.

Length of forewing : 14 mm.

Hab. Cailulu, Angola (Pemberton).

1 ♀.

15. *Amata kalidupensis* sp. nov.

♂. Allied to *A. stenoxona* Hamps.; differs in having the antennae very strongly pectinated, head, pectus, and tegulae crimson, thorax black, and abdomen crimson with five narrow black rings.—The wings are narrower and more pointed, and the hyaline spots much smaller, except the one in cell and the one below it.

♀. Similar.

Length of forewing : 11 mm.

Hab. Kalidupa, Toekan Besi Islands, south-west of Celebes, January 1902 (H. Kühn).

1 ♂, 1 ♀.

16. *Amata jacksoni* sp. nov.

♀. Head, thorax, and abdomen brilliant metallic oil-green.—Wings most brilliant metallic blue: on forewing are six hyaline spots, one below base of cell, one in the cell, one below cell near origin of vein 2, one beyond apex of cell, one between veins 3 and 4, and one between veins 4 and 5; on hindwing there are two hyaline spots, one smaller subbasal spot and a larger one on disc.

Length of forewing : 20 mm.

Hab. Uganda (Jackson).

1 ♀.

17. *Amata stictoptera* sp. nov.

♀. Allied to *tomasina* Butl., but much smaller. Differs from that species in the very minute hyaline spots and much narrower bands on abdomen.

Length of forewing : 12.5 mm.

Hab. Bandoukan, Ivory Coast, February 22, 1903 (Pemberton).

2 ♀♀.

18. *Amata elwesi* sp. nov.

♂. Allied to *euryptera* Hamps. Antennae black; head, abdomen, and thorax pale straw-yellow.—Forewing pale straw-yellow, veins and fringe very narrowly black.—Hindwing pale straw-yellow, fringe hardly a hairsbreadth black.

Length of forewing : 17 mm.

Hab. Burmah (Adamson) (coll. H. J. Elwes).

1 ♂.

19. *Amata snelleni* sp. nov.

♀. Antennae black, tips white; frons, collar, and tegulae orange; thorax deep brown streaked with orange; abdomen deep brown with seven orange rings.—Forewing, basal three-fifths orange, a long patch in cell, a spot below it, and a dash between veins 2 and 3 deep brown, outer two-fifths deep brown, a patch beyond cell, one between veins 3 and 4 and 4 and 5 orange.—Hindwing orange with a very wide deep brown border, a wedge-shaped patch of same colour running into the orange from tornus, and a drop-like spot from costa.

Length of forewing : 16 mm.

Hab. East Java.

1 ♀.

20. *Amata quadripunctata* sp. nov.

♂. Frons and tegulae orange; thorax chocolate-brown with an orange dot on shoulders; abdomen chocolate-brown with six orange rings.—Forewing chocolate-brown with four orange spots, one below base of cell, one in cell, one below middle of cell, and a minute one on vein 4.—Hindwing chocolate-brown, orange at base.

Length of forewing: 12 mm.

Hab. Padang Sidempoean, West Sumatra (Ericsson).

1 ♂.

21. *Amata williami* sp. nov.

♂. Head and antennae black; thorax oily steel-green; abdomen steel-green, a basal reddish cinnamon belt, and one on fourth and fifth segments.—Forewing metallic blue-green, a hyaline patch below base of cell, one in cell, one between veins 1 and 2, one between veins 3 and 4 and 4 and 5, and one beyond apex of cell.—Hindwing hyaline with steel-green border and transverse central hour-glass-shaped band.

♀. Smaller.

Length of forewing: ♂ 14 mm.; ♀ 10.5 mm.

Hab. Kikuyu Escarpment, British East Africa, 6500—9000 ft., December 1900—January 1901 (W. Doherty).

29 ♂♂, 5 ♀♀.

22. *Amata connectens* sp. nov.

♀. Allied to *A. sladeni* Moore. Antennae brown; head yellow; thorax yellow, a longitudinal black streak on the patagia; abdomen yellow.—Forewing hyaline yellowish, tip, fringes, and nervures brown, vein 5 and discocellulars more broadly brown.—Hindwing hyaline yellowish, costa and fringe brown.

Length of forewing: 16 mm.

Hab. Bernardmyo, Burmah, 6000 ft., May 1890 (W. Doherty) (ex coll. Elwes).

1 ♀.

23. *Amata albicornis* sp. nov.

♀. Antennae, basal third black, rest white; head black; thorax black with central orange patch; abdomen black with a basal orange ring, three lateral orange patches, and an orange ring on fifth segment which does not meet dorsally.—Forewing black, apex with large white patch, a small hyaline spot below base of cell, a large one in cell, one below cell on vein 1 near tornus, one between veins 3 and 4, one between veins 4 and 5, and one between veins 6 and 7.—Hindwing black, a large treble hyaline spot below cell.

♂. Similar.

Length of forewing: 26 mm.

Hab. Manson Mountains, Tonkin, 3000 ft., April—May (H. Fruhstorfer).

3 ♂♂, 3 ♀♀.

24. *Amata leechi* sp. nov.

♀. This is the insect J. H. Leech identified as *acrospila* Feld. It differs from the type of *acrospila* by the brown, not black colour, by the much wider lemon-yellow bands of the abdomen, by the hyaline patches being yellow, not white, by the hyaline patch below base of cell extending to tornus and only divided into two by a very narrow brown band, by there being a large hyaline

patch between veins 6 and 7 as well as between 7 and 8, by there being two terminal yellow patches in place of one white one, and in the whole hindwing being hyaline edged with brown, not merely the basal half.

♂. Differs from ♀ by having one terminal spot only, and the hyaline patch between veins 7 and 8 much smaller.

Hab. Washau, West China, 6000 ft., July 1889 (A. E. Pratt).

1 ♀ (type), 5 ♂♂.

25. *Amata jankowskyi* sp. nov.

♂. Nearest to *A. pasca* Leech; differs at first sight by its much shorter, broader, and rounder wings. Pectus golden, not brown; frons black, not golden; tegulae golden, not brown; centre of thorax deep brown, not golden; a broad orange band encircling base of abdomen, not a yellow dorsal spot only; an orange band round last abdominal segment, which is wanting in *pasca*; the hyaline spots on forewing are more vitreous and white, not buff; more than two-thirds of hindwing are hyaline. Antennae have only extreme tip white, while in *pasca* two-fifths of the whole are white.

♀. Similar, but abdominal orange bands are broader and the hyaline spots larger.

Length of forewing: ♂ 22 mm.; ♀ 24 mm.

Hab. Ichang, Yangtse-Kiang River, China (Captain Jankowsky).

2 ♂♂, 1 ♀.

26. *Amata flavolavata* sp. nov.

♀. Nearest *A. melaena* Wlk., but distinguishable at once by the last abdominal segment being orange, and not blue-black as in *melaena* and *melaena andersoni*. Frons orange; tegulae and patagia orange; thorax black, orange at hind edge; antennae **entirely** black; abdomen bright orange with five black rings.—Forewing hyaline orange-yellow, costal area between costal and subcostal nervures with basal three-fifths orange-yellow, area between vein 1 and inner margin orange, a black patch on discocellulars, apex and outer margin narrowly black, nervures black, veins 4 and 5 stalked.—Hindwing hyaline orange-yellow, outer margin and nervures black.

Length of forewing: 27 mm.

Hab. Khasia Hills (Native coll.) (ex coll. H. J. Elwes).

1 ♀.

27. *Amata simillima* sp. nov.

♀. Allied closely to *A. basigera* Wlk., but larger and much broader. Differs in the hyaline markings of forewings being more clothed with scales and much larger, and the spot between veins 7 and 8 which is present in *basigera* being absent.—Hindwings have only the base orange, and two very narrow hyaline streaks below and beyond cell.

Length of forewing: 15.5 mm.

Hab. Pulo Bisa, north of Obi Island, Moluccas, September 1897 (W. Doherty).

1 ♀.

28a. *Amata basigera gilolensis* subsp. nov.

♂. Differs from *basigera basigera* in the two hyaline spots in the hindwing being reduced so much as to be scarcely visible.

♀. Differs in having the whole hindwing orange with a narrower brown margin.

Hab. Gani, Halmaheira, Moluccas, November 1896 (W. Doherty), 3 ♂♂, 4 ♀♀; Halmaheira (Waterstradt), 3 ♂♂, 3 ♀♀. Type ♀ Halmaheira (Waterstradt).

29a. *Amata perixanthia sinensis* subsp. nov.

♂. Differs from *perixanthia perixanthia* Hamps. from Formosa by its larger size; by the yellow, not orange, frons, tegulae, and patagia; by the narrower yellow, not orange, abdominal rings; by the broad pale yellow scaled edges of the hyaline and subcostal areas, and the antennae having the apical one-fifth white, not being entirely black as in *p. perixanthia*.

Length of forewing: *perix. perixanthia*, ♂ 19 mm.; ♀ 19 mm.

" " " *perix. sinensis*, ♂ 24 mm.; ♀ 27 mm.

Hab. Kwei-chon, West China, July 6, 1890 (A. E. Pratt), 18 ♂♂, 11 ♀♀; 2 ♂♂ no locality; Moupin, West China, June 1890 (Kricheldorf), 107 ♂♂, 47 ♀♀.

30. *Amata fruhstorferi* sp. nov.

♀. Allied to *A. signata* Wlk. Differs by the white, not orange, frons; by the entirely black thorax, tegulae, and patagia; by it having only three orange abdominal rings (one at base, one on segment 3, and one on segment 8), instead of six. On the forewing the hyaline patch between veins 2 and 3 is half as long as that between veins 3 and 4, while in *signata* they are equal in length.

♂. Similar, but with smaller hyaline markings.

Length of forewing: ♂ 18 mm.; ♀ 22 mm.

Hab. Mauson Mountains, Tonkin, 3000 feet, April and May (H. Fruhstorfer). 2 ♀♀, 3 ♂♂. ♀ type.

31. *Amata khasiana* sp. nov.

♀. Frons black; collar orange; antennae black, tips white; thorax black; abdomen black with six orange-yellow bands.—Forewing black-brown, a semihyaline yellowish buff patch below base of cell, one towards apex of cell, one between veins 1 and 2, one between veins 3 and 4 and 4 and 5, one between 6 and 7, and a small one between 7 and 8.—Hindwing black-brown with two large buff semihyaline patches.

Length of forewing: 17 mm.

Hab. Khasia Hills, Assam, June 1894 (Native coll.).

1 ♀.

32. *Amata pseudextensa* sp. nov.

♀. Frons white; antennae sooty brown, last two segments white; collar very narrowly buffy yellow; thorax sooty black-brown; abdomen sooty black-brown, basal and fifth segment lemon-yellow.—Forewing sooty black-brown, a large hyaline creamy patch reaching from below base of cell and vein 1 to origin of vein 2, when it curves obliquely between veins 1 and 2 to tornus; in the centre of this patch are two sooty spots; between veins 2 and 3 is a small creamy hyaline patch, and two larger ones between veins 3 and 4 and 4 and 5, and a very long one between 6 and 7; a large similar patch occupies the apical two-thirds of cell.—Hindwing, basal three-quarters creamy hyaline, apical fourth sooty black-brown.

Length of forewing : 22 mm.

Hab. Mount Kina Balu, North Borneo.

2 ♀ ♀.

33. *Amata nigrobasalis* sp. nov.

♂. Frons white; antennae black-brown, cinnamon at the tips; thorax and abdomen black.—Forewing black strongly washed with oil-green, a hyaline patch in cell, one below cell resting on vein 1, one between veins 3 and 4 and 4 and 5, and one between 6 and 7 and 7 and 8.—Hindwing black, a white patch on inner area.

Length of forewing : 14 mm.

Hab. Cape Coast Castle, West Africa.

1 ♂.

A ♀ from Kampala, Uganda, April 1900 (Captain H. Rattray), differs only in having the frons black and a minute dot at apex of cell of hindwing white.

34. *Amata kenredi* sp. nov.

♀. Antennae black tipped with white; head, thorax, and abdomen blackish oil-green.—Forewing long and pointed, greenish purple; a hyaline spot below base of cell, a second larger between cell and vein 1, a similar patch at apex of cell, a larger patch between veins 4 and 5, a smaller one between 5 and 6, and a hyaline dot between veins 7 and 8.—Hindwing greenish purple, a hyaline patch near base of inner area and one at apex of cell.

Length of forewing : 20 mm.

Hab. Bopoto, Upper Congo (Rev. Kenred Smith).

1 ♀.

35. *Amata everetti* sp. nov.

♀. Antennae brown; head, tegulae, and patagia orange; thorax deep brown; abdomen black with six orange rings.—Forewing black-brown, cell entirely hyaline, area between cell and vein 1 curving along vein 2 almost to tornus, also hyaline, a black spot on discocellulars, from tornus between veins 1 and 2 half-way to origin of vein 2 a black-brown patch, a similar patch between veins 2 and 3 leaving a hyaline space half-way from base of these veins to outer margin, apical sixth dark brown, a patch of same colour running in between veins 5 and 6 half-way to discocellulars, nervures dark brown.—Hindwing hyaline with irregular dark brown margin.

Length of forewing : 16 mm.

Hab. South Flores, November 1896 (dry season) (Everett).

1 ♀.

36. *Amata vandepolli* sp. nov.

♂. Frons white; antennae black, apical fourth white; tegulae white; thorax black; abdomen brown-black glossed with bright violet, two latero-dorsal white patches on basal and a white band on fifth segment.—Forewing bronzy black-brown, a hyaline patch between cell and vein 1, a similar one about a third from apex of cell, one between veins 3 and 4, a smaller one between 4 and 5, and a still smaller one between 7 and 8.—Hindwing bronzy black-brown, a subbasal and a discal hyaline patch.

Length of forewing : 18 mm.

Hab. Padang Pandjang, Padang Bovenlanden, West Sumatra.

1 ♂.

37. *Amata henrici* sp. nov.

♀. Frons black; antennae black, apical fifth white; collar crimson; thorax and abdomen oily steel-green, a crimson dorsal patch at base of abdomen, abdominal tuft fawn-colour.—Forewing oily steel-green, a hyaline patch in cell, and a minute hyaline dot between veins 3 and 4 and 4 and 5.—Hindwing oily steel-green.

♂. Similar, but lacks the hyaline intranenal dots.

Length of forewing: ♀ 14 mm.; ♂ 11 mm.

Hab. Dammer Island, December 15—20, 1898 (H. Kühn), 3 ♂♂, 3 ♀♀ (♀ type); Letti Island, July 1892 (W. Doherty), 2 ♂♂, 3 ♀♀; 2 ♂♂, 1 ♀, Timor Laut Islands, June—July 1892 (W. Doherty); 2 ♂♂, Sermatta Island (H. Kühn); 3 ♂♂, 1 ♀, Larat Island, Timor Laut Islands, January—February 1901 (H. Kühn).

2 ♀♀ from Letti and 1 ♀ from Dammer have a hyaline spot in disc of hindwing and the spots on forewing larger.

38. *Amata attenuata* sp. nov.

♂. Allied to *chrysozona* Hamps., but at once distinguished by its long narrow wings. Frons black; antennae black, apical fifth white; collar orange; thorax bronzy oil-brown; abdomen bronzy oil-brown, an orange ring at base and on fifth segment, and a lateral orange band joining these two rings.—Forewing bronzy brown, a hyaline oval patch below base of cell, a large quadrate one occupying apical half of cell, a diamond-shaped one below cell between vein 1 and origin of vein 2, one between veins 3 and 4 and 4 and 5, and between veins 7 and 8.—Hindwing bronzy brown, a subbasal hyaline patch with the third nearest the abdominal margin orange, a discal round hyaline patch.

♀. Similar, but wings shorter and broader.

Length of forewing: ♂ 16 mm.; ♀ 14 mm.

Hab. Kikuyu Escarpment, 6500—9000 ft., October—November 1900 (W. Doherty).

23 ♂♂, 6 ♀♀ (♂ type).

39. *Eressa dohertyi* sp. nov.

♂. Allied to *E. farra* Hamps., but at once distinguishable from that species by its deep black-brown, not reddish cinnamon colour, and by the abdomen being broadly ringed with orange, not having a dorsal row and infra-lateral rows of orange dots. In the ♂ the hyaline spots are smaller.

♀. Differs from ♀ *E. farra* in the ground-colour of the wings being mouse-grey, not cinnamon; the hyaline spots on forewings are larger and more ill-defined, on the hindwings the hyaline area occupies five-sixths of the wing. *E. dohertyi* in both sexes is also larger.

Length of forewing: *dohertyi*, ♂ 15.5 mm.; ♀ 19 mm.

" " " *farra*, ♂ 13 mm.; ♀ 15 mm.

Hab. Adonara, Lesser Sunda Islands, November 1891 (W. Doherty).

5 ♂♂, 4 ♀♀ (♂ type).

40a. *Eressa confinis malaccensis* subsp. nov.

♂. Differs from *E. confinis confinis* in its smaller size, more clay-brown, not grey ground-colour, and pure white hyaline markings. On the forewings the

hyaline patches are smaller, shorter, and much more separated, while the hindwing has the hyaline area extended over five-sixths of the wing.

Length of forewing : *malaccensis*, ♂ 12 mm. ; ♀ 15 mm.

" " " *confinis*, ♂ 16·5 mm. ; ♀ 17·5 mm.

Hab. Waterfall Valley, Penang, March—April 1898 (Curtis), 3 ♂♂ (type) ; Chiem-Hoa, Central Tonkin, August—September (H. Fruhstorfer), 1 ♀.

40b. *Eressa confinis intensa* subsp. nov.

♂. Colour of wings and body deep chocolate-brown ; hyaline spots on both wings much reduced ; orange markings on thorax and the dorsal and lateral rows of orange spots on abdomen very small.

Size large.

Length of forewing : 15·5 mm.

Hab. Belgaum, India, June 1896.

1 ♂ (1 pair in British Museum collection).

41a. *Eressa aperiens khasiana* subsp. nov.

♂. Differs from *aperiens aperiens* in its much blacker colour ; also the base of forewing and dark markings of forewings are much more conspicuous owing to the reduction in size of the hyaline patches.—Hindwing entirely black, a small hyaline spot near tornus.

Hab. Khasia Hills, Assam, May 1894, August—September 1895 (Nat. coll.).

4 ♂♂.

A fifth ♂ from the low country, Cherrapunji, Assam, is not so black, and the hyaline spot on hindwing is larger.

42. *Eressa vespoides* sp. nov.

♂. Differs from *vespa* Hamps. in the broader and deeper orange markings of the head, thorax, and abdomen, the more serrated antennae, and the shorter and broader forewings, which are also less pointed at apex. The costal area is not wholly dark as in *vespa*, but the basal three-fifths are vitreous. In *vespa* the space between veins 2 and 3 is filled in with a large patch of black joining the cell and discocellular patch to the outer margin just above tornus ; in *vespoides* this spot is entirely absent. The dark margins and nervures on both wings are also much narrower than in *vespa*.

♀. Similar.

Length of forewing : 12 mm.

Hab. Khasia Hills, Assam, September 1895 (Nat. coll.).

2 ♂♂, 1 ♀.

43. *Eressa ichneumoniformis* sp. nov.

♂. Similar to *vespoides*, but larger ; all the markings on head, thorax, and abdomen very narrow and pale lemon-yellow. The margins of the fore- and hindwings very much narrower, and the black bar between veins 4 and 5 joining the discocellular patch to the outer margin is absent.

The ♀ has vein 6 bifurcated.

Length of forewing : ♂ 13·5 mm. ; ♀ 14·5 mm.

Hab. Khasia Hills, Assam, May 1894.

1 ♂, 1 ♀.

44. *Eressa simplex* sp. nov.

♂. Head brown-black; collar yellow; antennae black; thorax black; abdomen brown-black with dorsal and lateral rows of yellow patches.—Forewing brown-black; a long hyaline band from base of cell along vein 1 to half-way along vein 2, a wedge-shaped hyaline patch in cell, a hyaline patch between veins 3 and 4 and 4 and 5, and one between 6 and 7.—Hindwing: basal half hyaline, apical half brown-black.

Length of forewing: 13 mm.

Hab. Subathu, India, July 1889.

1 ♂.

45. *Eressa everetti* sp. nov.

♀. Head, thorax, and abdomen pale yellow, centre of thorax and five narrow abdominal rings pale brown; antennae fuscous, tips white.—Forewing opaline iridescent hyaline, apex and margins brown, discocellular patch and a patch between veins 2 and 3 brown, veins 3 and 5 broadly brown.—Hindwing opaline iridescent hyaline, margins very narrow brown.

♂. Similar.

Length of forewing: 15 mm.

Hab. Tutong, North Borneo, May 1895 (A. Everett), 1 ♀ (type); Bauguran Natuna Islands, July–October 1894 (Hose), 2 ♂♂.

46. *Neeressa whiteheadi* sp. nov.

♂. Very much larger than *N. sagada* Semper. Frons white; antennae black; thorax buffish; abdomen cream-colour with six narrow brown rings.—Forewing pale chocolate, slightly semihyaline, a longitudinal dark brown band from base through cell to apex, basal half of costal area yellow.—Hindwing pale chocolate, rather more semihyaline than forewing, costal area yellow.

Length of forewing: 19 mm.

Hab. Lepanto, North Luzon (John Whitehead), 1 ♂ (type); North Luzon, 5000–6000 ft. (John Whitehead), 2 ♂♂.

47. *Hyalæthea kuehni* sp. nov.

♂. Allied to *bivittata* Hamps. Frons and antennae black; legs orange; vertex, thorax, and abdomen bronzy steel-green.—Forewing brilliant deep purple, a vitreous hyaline patch below base of cell; a very large vitreous hyaline patch occupies apical two-thirds of cell; basal half of hindmargin orange.—Hindwing: basal half orange, apical half deep brilliant purple.

♀. Similar.

Length of forewing: ♂ 13 mm.; ♀ 14 mm.

Hab. Larat Island, January 1901 (H. Kühn).

1 ♂, 1 ♀.

48. *Hyalæthea meeki* sp. nov.

♂. Similar to *woodfordi* Butl., but much smaller; hyaline areas of forewings larger; hindwings have only costal and basal areas orange, rest of wing hyaline, costal margin orange, not brown, outer margin from tornus to termen brown, not orange.

♀. Shows same differences, but has only base of hindwing orange.

Length of forewing: *meeki*, ♂ 13 mm.; ♀ 15 mm.

" " *woodfordi*, ♂ 15 mm.; ♀ 17 mm.

Hab. Guadalcanar, Solomon Islands, April 1904 (A. S. Meek).

2 ♂♂, 4 ♀♀; 2 ♀♀(?).

49. *Hyalæthea dohertyi* sp. nov.

♂. Frons white; antennæ black; thorax black, base of patagia white; abdomen black, base and two subdorsal rows of spots white.—Forewing purple, central two-thirds of cell hyaline yellow; a hyaline yellow patch between vein 1 and cell from base to origin of vein 2, a hyaline spot beyond apex of cell, and a hyaline dot on each side of vein 4.—Hindwing purple, a hyaline spot on inner area.

Length of forewing: 15 mm.

Hab. Humboldt Bay, Dutch New Guinea, September–October 1893 (W. Doherty).

2 ♂♂.

50a. *Hyalæthea metaphæa georgiensis* subsp. nov.

♂. Differs from *metaphæa metaphæa* by the wider dark markings in the wings and the almost absent lateral yellow bands on abdomen.

♀. Similar, but orange base of abdomen broader than in *m. metaphæa*.

Hab. New Georgia, Solomon Islands, March 1904 (A. S. Meek).

1 ♂, 2 ♀♀.

51. *Hyalæthea decipiens* sp. nov.

♂. Near *metaphæa* Druce, but differs in the narrower hyaline patches, the almost entirely black tornal lappet on hindwing, the brownish buff, not black, front of legs, and the almost entirely black abdomen.

Length of forewing: 15 mm.

Hab. New Georgia, Solomon Islands, March 1904 (A. S. Meek).

2 ♂♂.

52. *Hyalæthea alberti* sp. nov.

♂. Differs from *metaphæa* Druce in having the hyaline patches on forewing shorter, in having base of hindwing orange, and in having five complete orange rings on abdomen and hindpart of thorax black.

♀. Similar.

Length of forewing: ♂ 16 mm.; ♀ 18 mm.

Hab. Vella Lavella, Solomon Islands, February 1908 (A. S. Meek).

5 ♂♂, 2 ♀♀.

Pseudoceryx gen. nov.

Differs from *Hyalæthea* in having in forewing vein 2 from end of cell, veins 3, 4, and 5 on a long stalk and vein 6 from end of cell, veins 7 and 8 on a long stalk, and 9 absent.

53. *Pseudoceryx dohertyi* sp. nov.

♀. Antennæ black; head and thorax deep blue, a dot on frons, a spot on each shoulder, and a patch on hinder part of thorax white; abdomen brilliant deep blue, two lateral rows of tiny white dots.—Forewing deep blue, excised deeply at outer margin between veins 2 and 5, a large hyaline patch in cell, a large curved long

similar patch from base of wing along vein 1 almost to tornus, and one on each side of vein 3.—Hindwing deep blue, a hyaline spot below base of cell.

Length of forewing: 18 mm.

Hab. Biak Island, Geelvink Bay, Dutch New Guinea (W. Doherty).

1 ♀.

54. *Epitoxis ansorgei* sp. nov.

♀. Head and thorax black; antennae black, tips white; abdomen oily steel-green, a basal patch and segments 3 and 4 dark orange-buff.—Forewing steel green, a quadrate hyaline patch in cell, one below cell, one between veins 3 and 4, one between veins 4 and 5, and one between veins 7 and 8.—Hindwing black, a large creamy hyaline patch below base of cell and a large hyaline white one on disc.

♂. Similar, but segments 3, 4, and 5 are reddish buff.

Length of forewing: ♂ 15 mm.; ♀ 18 mm.

Hab. Mruli, Unyoro, May 16, 1897 (Dr. Ansorge).

1 ♂, 1 ♀; ♀ type.

55a. *Pseudonacalia puella minor* subsp. nov.

♂. Differs from *puella puella* in its much smaller size and in the four hyaline patches of the forewing being reduced to small round dots.

♀. Is also much smaller, and the four hyaline patches are equal in size and about half the size of the largest patch in *p. puella*.

Length of forewing: *puella minor*, ♂ 10 mm.; ♀ 12 mm.

" " " *puella puella*, ♂ 13 mm.; ♀ 15 mm.

Hab. Kikuyu Escarpment, British East Africa, 6000—9000 ft., March 1901 (W. Doherty).

56. *Dysauxes punctata kaschmiriensis* subsp. nov.

♂. Differs from *punctata punctata* in its larger size and broader wings. The hyaline white spots are larger and more conspicuous, and the brown margin of hindwings is much broader.

♀. Similarly distinguished from ♀ *punctata punctata*.

Hab. Gourais Valley, Kaschmir, 7000 ft., June 1887 (John Henry Leech).

5 ♂♂, 8 ♀♀.

57. *Apisa aurantiaca* sp. nov.

♂. Palpi orange; head orange; thorax orange; antennae fuscous; abdomen orange, dorsal line and last three segments clay-grey.—Forewing, basal three-fifths orange, apical two-fifths clay-grey.—Hindwing, basal three-fourths pale orange, outer fourth clay-grey.

Length of forewing: 16 mm.

Hab. Kassai District, Congo Free State (Taymans), 1 ♂ (type); Bitye, Ja River, Camaroons, 2000 ft., January—March 1907 (dry season) (G. L. Bates), 1 ♂.

58. *Apisa rendalli* sp. nov.

♂. Allied to *canescens* Walk. Resembles small ♂♂ of *canescens*, but the forewings are shorter and broader and termen is more rounded. Uniform clay-brown.

Length of forewing: 14 mm.

Hab. Zomba, Upper Shiré River, 3000 ft., October—December 1895 (Dr. Percy Rendall).

3 ♂♂.

59. *Apisa subcanescens* sp. nov.

♂. Antennae buffy clay; head, thorax, and abdomen silvery mouse-grey.—Forewing, costa and fringes mouse-grey, nervures grey, rest of wing semihyaline white.—Hindwing semihyaline white, abdominal margin to tornus pale grey.

♀. Similar, but much larger. In *canescens* Walk. the ♀ is not much more than half the size of the largest ♂♂.

Length of forewing: ♂ 15 mm.; ♀ 22 mm.

Breadth " ♂ 9 mm.; ♀ 15 mm.

Length of forewing large *canescens*: ♂ 36 mm.; ♀ 25 mm.

Breadth " " " ♂ 24 mm.; ♀ 15 mm.

60. *Metarctia taymans* sp. nov.

♂. Near to *haematoessa* Holl. Legs inside and in front crimson; palpi and head brown; antennae brown, paler towards the tips; thorax and abdomen light earth-brown.—Forewing pale buff, all nervures, costal and inner areas earth-brown, a large patch of earth-brown on discocellulars and another at base of wings, intranervular spaces splashed and clouded with earth-brown, a submarginal row of semilunar earth-brown spots.—Hindwing pale buff washed with salmon.

Length of forewing: 25 mm.

Hab. Kassai District, Congo Free State (Taymans).

1 ♂.

61. *Metarctia erlangeri* sp. nov.

♀. Antennae black; head and thorax bright orange brick-red; abdomen bright orange brick-red, with black bands on interspaces of segments.—Forewing salmon-cinnamon, fringe yellowish salmon.—Hindwing yellowish cinnamon salmon-pink.

♂. Differs in the abdomen being more orange; the costa of forewing bright salmon-red, the fringe salmon washed with cinnamon-brown; the hindwing is bright salmon-pink.

Length of forewing: ♂ 18–22 mm.; ♀ 30 mm.

Hab. Djedda to Sibbe, Arussi Galla Country, Abyssinia, 2900 metres, July 28, 1900 (Erlanger & Neumann), 1 ♀ (type); Muhumbua, Cumbo River to Unglo River, September 18, 1903 (Dr. Ansorge), 1 ♂; Bulabula, Bihé, Angola, October 2, 1904 (Dr. Ansorge), 1 ♂.

62. *Pseudapiconoma affinis* sp. nov.

♂. Allied to *daphaena* Hamps.; differs in the forewings being much rounder at termen and much broader, in the basal half of hindwings being semihyaline white, in the intranervular spaces and costal area of forewings being crimson, and in there being four complete scarlet rings on abdomen.

Length of forewing: *daphaena* ♂ 20 mm.

Breadth " " " 13 mm.

Length " *affinis* ♂ 19 mm.

Breadth " " " 14 mm.

Hab. Kassai District, Congo Free State (Taymans), 1 ♂ (type); Stanley Pool to Lokolele, Congo River, 1894 (Rev. Harrison), 1 ♂.

63. *Pseudapiconoma batesi congoensis* subsp. nov.

♀. Differs from *batesi batesi* Druce by the earth-brown, not orange, head and tegulae, the duller orange abdomen, the duller, more earth-brown forewings, the brown, not crimson, subcostal nervure, and the much smaller of the yellow red-ringed patches on the forewings.

♂. Does not differ from ♂ *batesi batesi*.

Hab. Luebo Kassai, Congo, October 1903 (Landbeck), 1 ♀ (type); Yakusu, Upper Congo (Kenred Smith), 2 ♂♂ : Bopoto, Upper Congo (Kenred Smith), 1 ♂ : Kassai District, Congo (Taymans), 1 ♂ ; south of Congo River (Bentley), 1 ♂.

64. *Pseudapiconoma batesi ugandae* subsp. nov.

♀. Differs from *batesi congoensis* in the olive-brown colour of the forewings, head, and thorax, and in there being a red-ringed yellow spot on vein 3 and a red one on vein 4.

♂. Differs from the ♂♂ of *batesi batesi* and *batesi congoensis* in the uniform rufous orange or orange-rufous head, thorax, and abdomen, and in the much smaller red-ringed yellow patches on the forewings.

Hab. Entebbe, Uganda (F. J. Jackson), 1 ♀ (type), 2 ♂♂ ; Entebbe, Uganda, November 1902 (Captain Rattray), 1 ♂.

65. *Pseudapiconoma coeruleifascia* (Walk.).

This insect was erroneously retained in *Metarctia* by Sir George Hampson. It has the normal ♂ of a *Pseudapiconoma*, with short broad forewings and very small hindwings. The undescribed male is as follows :—

♂. Pectus, tibiae, and coxae crimson ; head crimson ; antennae black ; thorax and abdomen orange-scarlet.—Forewing earth-brown, a crimson streak at base of subcostal and one below base of vein 1, a large orange-scarlet patch with darker edges between vein 1 and the origin of vein 2, a crimson dot on vein 2, a crimson spot in centre of cell and a patch at apex of cell, and a crimson spot on subcostal edge between veins 6 and 7.—Hindwing orange, costa and abdominal area orange-scarlet.

Length of forewing : ♂ 29 mm.

Breadth „ „ „ 19 mm.

Length of hindwing : ♂ 11 mm.

Breadth „ „ „ 8 mm.

Hab. of ♂ described : Moyambe, Sierra Leone, March 1903 (bred) (D. Cator).

The Tring Museum has 5 ♀♀ from Sierra Leone collected by Mr. Mitford, Captain Stevens, and Major Bainbridge.

66. *Pseudapiconoma ehrmanni* Holl.

This has been wrongly treated by Sir George Hampson as a synonym of *coeruleifascia* Walk. ; it is quite distinct, as the ♂ proves. Description of ♂ is as follows :—

♂. Forelegs yellowish clay-grey ; pectus and head crimson ; tegulae, basal half

yellowish clay-grey, outer half reddish orange; patagia reddish orange; thorax yellowish clay-grey spotted with orange; abdomen reddish orange.—Forewing, basal half clayish mouse-grey, apical half ochraceous orange, nervures clayish mouse-grey; costa, basal two-thirds clayish mouse-grey, apical one-third ochraceous orange; subcosta, basal half crimson, outer half ochraceous; basal two-fifths of inner area (area between vein 1 and hindmargin) scarlet-orange; an ochraceous orange patch in apex of cell, another between vein 1 and origin of vein 2, a greyish cloud between subcosta and vein 3 half-way between apex of cell and termen.—Hindwing orange-salmon.

Hab. of ♂♂ described: Wassau District, forty-five miles inland from Sekondi, Gold Coast.

The 3 ♀♀ in Tring Museum are from Kwahen, Guinea, June 1901, Sierra Leone, and Luebo Kassai, Congo, 1903 (Landbeck).

67. *Metapiconoma rattrayi* sp. nov.

♂. Allied to *M. ochracea* Walk.; antennae black; tarsi and tibiae pale mouse-grey; pectus and frons crimson, vertex orange; tegulae and patagia mouse-grey edged with orange; thorax pale mouse-grey with hind edge and two longitudinal bands orange; abdomen Indian yellow, intersegmental spaces pale slate-grey.—Forewing, basal three-fourths mouse-grey, outer fourth Indian yellow, costa and nervures pale mouse-grey, basal two-fifths of subcostal crimson, a crimson splash on vein 1 one-third from base, an Indian-yellow patch at apex of cell and an obliquely transverse row of six such patches between veins 1 and 7.—Hindwing Indian yellow.

♀. Head pale crimson; thorax as in ♂; abdomen orange with pale crimson base and broad intersegmental slate bands.—Forewing dark fawn-colour or fawn-brown, an ill-defined orange spot in cell, a hyaline spot ringed with pale orange between veins 1 and 2, and four similar larger ones between veins 3 and 7, basal seventh of subcostal crimson, and basal third of inner area orange and scarlet, a faint broad submarginal rufous band.—Hindwing, basal third rosy crimson, outer two-thirds orange-buff.

Length of forewing: ♂ 26 mm.; ♀ 31 mm.

Hab. Entebbe, Uganda, September 1901—November 1902 (Captain Rattray), 6 ♂♂ (type), 1 ♀; Kurunga, Kyanika, Bulamwezi, March 30, 1897 (Dr. Ansorge), 1 ♂; Weni, River Torn, April 21, 1899 (Dr. Ansorge), 1 ♂.

68. *Pseudapiconoma preussi* Auriv.

Pseud. speculigera Grünberg is the ♀ of *Pseud. preussi* Auriv., as is easily seen by the abdomen in the figure, which is described as follows: "each segment from 2-6 bright rust-red with fore and hind margin broadly brown-grey." Now none of the other *Pseudapiconoma* except *preussi* have the red segments with a double grey border, and *preussi* is only known in the ♂ sex and *speculigera* only in the ♀ sex. Moreover, *preussi* has an outer row of five semihyaline spots, while the other ♂♂ only have two; the first ♀ *speculigera* has six spots and the second has five, while all other ♀ *Pseudapiconoma* have only four. It is therefore quite clear that *speculigera* is the ♀ of *preussi*.

69. *Pseudapiconoma vitreata* sp. nov.

This species is quite distinct from *fenestrata* Jord.

♀. Legs, head, antennae, and thorax very dark russet-brown; abdomen very dark russet-brown, two dorsal and one lateral line of black spots on intersegmental spaces.—Forewing excised at termen, basal and apical fourths dark russet-brown, rest of wing very clear hyaline, a very large discocellular patch, a smaller one between veins 7 and 8, and costa dark russet-brown.—Hindwing hyaline with broad deep russet-brown margin, cell semihyaline russet-grey.

Length of forewing: 33 mm.

Hab. ?

1 ♀.

NOTES ON SEA ELEPHANTS (*MIROUNGA*).

By THE HON. WALTER ROTHSCHILD, PH.D.

(Plates VIII. and IX.)

THE Sea Elephants or Elephant Seals (*Mirounga*) have always interested me, both from their curious distribution as well as on account of their rapidly approaching extermination.

The immediate incentive for publishing the accompanying plates was the acquisition of the magnificent specimen of the Southern form (*Mirounga patagonica* Gray) from the Falkland Islands figured on Plate IX.

In the *Proceedings of the Zoological Society*, 1909, pp. 601—606, Mr. R. Lydekker has divided the Sea Elephants (*Mirounga*) into two species, one of which he divides into three distinct and one doubtful subspecies. In a footnote on page 606 he draws attention to certain facts furnished him by myself which alter somewhat his conclusions. In the same journal for 1910, pp. 580—588, Professor Einar Lönnberg, while maintaining his belief in the subspecific distinction among the Sea Elephants, proves by the comparison of a number of South Georgia Sea Elephant skulls that the cranial characters on which Mr. Lydekker relies are too variable to have any diagnostic value. This being the case I shall endeavour to find some constant characters and give a key to species and subspecies in a future article.

When Mr. Harris reported the existence of the small herd of the Northern Sea Elephant on Guadaloupe Island, and I requested him to procure specimens, he made me, to me, startling announcement that he must reach the island before the middle of May or the Sea Elephants would have migrated to the south. I looked up the matter, and I found that, although a few stray individuals might formerly have led a pelagic life north of the Equator, the bulk of the Northern Sea Elephants migrated in the hot weather to the Chilean coast and the islands near (Juan Fernandez, Masafuera, etc.). As Linnaeus based his *Phoca leonina* on Lord Anson's specimen brought in 1744 from the island of Juan Fernandez, the name must be retained for the Northern Sea Elephant, and, in spite of Mr. Lydekker's objection that the name is based on an immature specimen and therefore the diagnosis is faulty and insufficient, Gray's name of *patagonica* must stand for the Southern Sea Elephant.

Unlike Mr. Lydekker, I consider the Northern Sea Elephant also only